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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,408	10/12/2001	James A. Hagan	ROC920010283US1	9968
7590	08/27/2004			
James R. Nock IBM Corporation 3605 Highway 52 North Rochester, MN 55901-7829			EXAMINER AHMED, SHAMIM	
			ART UNIT 1765	PAPER NUMBER

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/976,408	<b>Applicant(s)</b> HAGAN ET AL.	
	<b>Examiner</b> Shamim Ahmed	<b>Art Unit</b> 1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 June 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-15,33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-15,33 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to Carpio (5,840,629) and Small et al (6,251,150) have been considered as regards to the fact that the references do not teach that the composition is not a slurry. Accordingly, the rejections based on Carpio and Small et al are withdrawn.

Therefore, the arguments are moot and a new ground(s) of rejection applies.

Applicants argue that Vines et al (6,048,789) do not teach the newly amended claims, which requires a cleaning polish etch composition for treating a previously polished substrate for use in a data storage device.

In response, examiner states that the argument is not persuasive because Vines et al's composition is capable of cleaning or removing slurry particles from a previously polished substrate and the substrate to be a glass or ceramic disk used in a data storage device is an intended use of the composition.

Applicants argue that Piltingsrud (6,402,851) fail to disclose or suggest that a cleaning (CPE) composition for treating a previously superfinished surface of the substrate with a pad while contacting the surface with the CPE composition, whereas, Piltingsrud describes an acid bath immersion composition.

In response, examiner states that applicant's argument is directed to a preamble as an intended use of a composition and the body of the claim does not depend on the preamble for completeness. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 2,11 are rejected under 35 U.S.C. 102(b) as being anticipated by Vines et al (6,048,789).

Vines et al disclose a cleaning polish composition including ammonium hydroxide as an etchant and citric acid as a carrying fluid for removing slurry particles and contaminants from a previously polished surface in order to improve the surface finish and remove particles from a substrate comprises glass or silica (col.1, lines 35-56).

Vines et al also disclose that the substrate is mechanically rubbing with a soft pad while contacting the post-CMP composition (col.1, lines 53-54).

4. Claims 2,7 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhou et al (6,090,214).

As to claims 2 and 7, the preamble of the claims has not given patentable weight because the recitation of the substrate to be “a glass substrate for use in a data storage device (claim 2)” and “a head wafer selected from a group consisting of Sendust and Permalloy (claim 7)” occurs in the preamble as an intended use of a composition.

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Zhou et al disclose a process of chemical mechanical cleaning for a semiconductor wafer in order to remove slurry particles from a previously polished surface using a chemical composition, wherein the composition consisting essentially of ammonium persulfate as etchant and deionized water as a carrying fluid (col. 3, lines 42-51, col.5, lines 2-9).

Zhou et al also disclose that the previously polished surface is mechanically rubbing with a poly vinyl alcohol (PVA) brush, which resemble as a pad while contacting the surface with the composition (col.4, lines 17-22, col.5, lines 5-9).

5. Claims 2-12 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Piltingsrud (6,402,851).

As to claims 1-2,12 and 14, Piltingsrud discloses a cleaning polish composition comprising an acid as a carrying fluid and component of aluminum ion (Al), which resemble as an etchant for super finishing a glass substrate and also for removing attached slurry particles (col.3, lines 39-61 and col.5, lines 49-55).

As to claims 4-6, Piltingsrud also discloses that the pH of the composition is less than about 3 (col.4, lines 6-9).

As to claims 7-8, Piltingsrud teaches that the substrate could be a computer disk drive having a magnetic substance such as Permalloy (ALMg/NiP) and the magnetic coating inherently includes Sendust (col.1, lines16-25).

As to claims 9-11, Piltingsrud teaches that the composition could be a basic solution having a pH of 9 to about 12 (col.4, lines 13-15).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 13,15 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piltingsrud (6,402,851) in view of Applicant's admitted prior art.

Piltingsrud discussed above in the paragraph 5 but fail to disclose the etchant composition could comprise Ce or Fe.

However, Applicant's admitted prior art discloses that the etchant comprises Ce, Fe, Zn, Ni etc. (see page 8, lines 9-12).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of claimed invention to combine Applicant's admitted prior art in Piltingsrud's

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composition because Ce, Zn, Fe, Ni, all of them are functionally equivalent for etching metal as taught by Applicant's admitted prior art.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Suzuki et al (5,885,334) and Kondo et al (6,117,775), both disclose a polishing process using a non-slurry composition, wherein the polishing is subsequent to a polishing process using a slurry composition.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shamim Ahmed whose telephone number is (571) 272-1457. The examiner can normally be reached on M-Thu (7:00-5:30) Every Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine G Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shamim Ahmed  
Examiner  
Art Unit 1765

SA  
August 21, 2004